



Environmental Assessment General Management Plan Revision / Site Development Study New Visitor Center, Administrative, and Maintenance Facilities December 2007



ENVIRONMENTAL ASSESSMENT
GENERAL MANAGEMENT PLAN REVISION /
SITE DEVELOPMENT STUDY

New Visitor Center, Administrative, and Maintenance Facilities



National Park Service

Tallgrass Prairie National Preserve
Kansas

**U.S. Department of the Interior
National Park Service**

**Environmental Assessment
General Management Plan Revision / Site Development Study
New Visitor Center, Administrative, and Maintenance Facilities**

**Tallgrass Prairie National Preserve
Chase County, Kansas**

Summary

The National Park Service (NPS) proposes to revise the *Tallgrass Prairie National Preserve General Management Plan* (2000 GMP) (NPS 2000a) because of changing circumstances (a new management partner) and new information. This general management plan revision (GMP revision) would amend and supplement the 2000 GMP. The GMP revision is intended to (1) reexamine management areas as they relate to the location of the visitor, administrative, and maintenance facilities; (2) modify management areas in order to implement desired conditions with regard to location of the proposed facilities, natural and cultural resources management and protection, and visitor experience and appreciation; and (3) determine whether actions proposed by the National Park Service or others are consistent with goals embodied in the approved 2000 GMP. All other decisions and management direction presented in the 2000 GMP would remain valid.

The National Park Service also proposes to construct a visitor information and administrative center and maintenance facility at Tallgrass Prairie National Preserve. The general scope and need for these facilities is outlined in the *Tallgrass Prairie National Preserve General Management Plan* (NPS 2000a). A visitor information and administrative center would provide the initial stop for visitors and allow them to orient themselves and plan their visit. It would also serve as a staging area for a public transportation system and for education and interpretation efforts. The proposed visitor information administrative center would also include offices for preserve management. The proposed maintenance facility would include offices and workspaces for most maintenance and natural resources employees. It would also include inside and outside spaces for storage of equipment, materials, and vehicles, including buses. The proposed facilities would improve visitor services and NPS operations and maintenance at the preserve.

This GMP revision examines two alternatives. Alternative A is the no- action alternative, which provides a baseline against which to compare the other alternatives. Under this alternative, the 2000 GMP would not be revised, and new facilities would be constructed in locations as described in the 2000 GMP.

Under alternative B, the proposed action and preferred alternative, management areas would be modified as part of the GMP revision, and new facilities would be constructed in locations as described in the GMP revision.

SUMMARY

There would be no change in management direction under alternative A, and there would be long- term adverse impacts to historic structures, cultural landscapes, soils, vegetation, wildlife, scenic quality, and water quality, which would range in intensity from minor to moderate.

Under alternative B, there would be short- and long- term adverse impacts to archeology, cultural landscapes, soils, prime and unique farmlands, vegetation, threatened and endangered species, wildlife, scenic quality, and water quality, at the proposed visitor center and administrative site. Impacts would range from negligible, negligible to minor, minor, or minor to moderate in intensity. There would be long- term, moderate, beneficial impacts to visitor experience/appreciation, and long- term, minor to moderate, beneficial impacts to preserve operations and historic structures. Under alternative B, there would be long- term adverse impacts to cultural landscapes, soils, prime and unique farmlands, vegetation, wildlife, scenic quality, and water quality at the proposed maintenance site. Impacts would range from negligible, negligible to minor, or minor in intensity. There would be long- term, negligible to minor, beneficial impacts to visitor experience/appreciation and long- term, minor to moderate, beneficial impacts to historic structures and preserve operations. The addition of acreage to the Flint Hills ranching legacy area under alternative B would result in negligible impacts to archeology, and long- term beneficial impacts to historic structures, cultural landscapes, soils, vegetation, wildlife, visitor experience/appreciation, scenic quality, and water quality. Impacts would range from negligible, negligible to minor, minor, or minor to moderate in intensity.

Note to Reviewers and Respondents

If you wish to comment on the GMP Revision / Site Alternatives Study, you may mail or e- mail comments to the address below. Our practice is to make comments available for public review during regular business hours. Individual respondents may request that we withhold their name and/or home address from the record, which we will honor to the extent allowable by law. *If you want us to withhold your name and/or address, you must state this prominently at the beginning of your comment.* We will make all submissions from organizations and businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public inspection in their entirety.

Please address comments to:

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Tallgrass Prairie National Preserve
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E- mail: tapr_superintendent@nps.gov

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ACRONYMS AND ABBREVIATIONS

2000 GMP	Tallgrass Prairie National Preserve Final General Management Plan / Environmental Impact Statement
CFR	Code of Federal Regulations
cm	Centimeter
CR	County Road
FEMA	Federal Emergency Management Agency
GMP	General Management Plan
KDOT	Kansas Department of Transportation
NEPA	National Environmental Policy Act of 1969
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRHP	National Register of Historic Places
SH	State Highway
SHPO	State Historic Preservation Office
USC	United States Code
USFWS	U.S. Fish and Wildlife Service

ACRONYMS AND ABBREVIATIONS

INTRODUCTION

Tallgrass Prairie National Preserve was established in 1996 “to preserve, protect, and interpret for the public an example of a tallgrass prairie ecosystem... and to preserve and interpret for the public the historic and cultural values represented on the Spring Hill Ranch” (Public Law 104- 333, 110 Stat. 4204, 1996).

The preserve is located in northern Chase County, in east- central Kansas (figure 1), and consists of 10,894 acres of rolling grasslands in the heart of the Flint Hills. Two major creeks (Fox Creek and a tributary, Palmer Creek) cross the preserve and many springs, seeps, and stock ponds are also present. In addition to the buildings and structures related to the ranching history of the preserve, a number of less prominent archeological features have been identified.

Originally, the National Park Trust purchased the 10,894- acre remnant of tallgrass prairie in June 1994 for future management as a unit of the national park system. The legislation that created the preserve states that not more than 180 acres may be owned by the National Park Service (NPS). The remainder will continue to be privately owned.

In 2005, the National Park Trust sold their interest in Tallgrass Prairie National Preserve to the Kansas Park Trust. The Kansas Park Trust is dedicated to the mission of enhancing visitor experiences at the preserve by assisting in private fundraising efforts, encouraging congressional support for implementation of preserve management plans, conducting special public events, and operating an on- site bookstore and gift shop. Later in the same year, The Nature Conservancy purchased an interest in Tallgrass Prairie National Preserve from The Kansas Park Trust. The Nature Conservancy is a private nonprofit organization whose mission is, “...to preserve the plants, animals, and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive” (TNC 2007a). The majority of Tallgrass Prairie National Preserve (all but 34.44 acres in federal ownership) is owned by The Nature Conservancy. The Tallgrass Prairie National Preserve is cooperatively managed by the National Park Service and The Nature Conservancy. The Nature Conservancy brings a new mission and objectives to long- term management of the preserve.

The National Park Service, The Nature Conservancy, and the Kansas Park Trust through its cooperating association with the National Park Service, remain partners in Tallgrass Prairie National Preserve. The three- party partnership is dedicated to:

- preserving and enhancing a nationally significant remnant of the tallgrass prairie ecosystem and the processes that sustain it
- preserving and interpreting the cultural resources of the preserve and the heritage associated with the former ranch property
- offering opportunities for education, inspiration, and enjoyment through public access to the geological, ecological, scenic, and historical features of the preserve (TNC 2007b)



FIGURE 1. VICINITY MAP

PURPOSE OF AND NEED FOR THE GENERAL MANAGEMENT PLAN REVISION

In 2000, the National Park Service completed a general management plan (GMP) (NPS 2000a) for the preserve with considerable public input. General management planning is the broadest level of decision making for parks. General management plans are required for all units in the national park system and are intended to establish the management direction of a park unit for the next 15 to 20 years. General management planning is the first phase of tiered planning and decision making. The general management plan looks years into the future and considers the park unit holistically, in its full ecological and cultural context and as part of a surrounding region. More detailed planning is contained in subsequent implementation plans.

The *Tallgrass Prairie National Preserve Final General Management Plan / Environmental Impact Statement* (2000 GMP) created management areas for the preserve (figure 2). These management areas prescribe certain actions and management objectives that can occur within the area. After a lengthy process (appendix E), it was concluded that the management area designated for visitor and preserve operations facilities within the preserve was not compatible with the mission and objectives of The Nature Conservancy, and that previously identified, adjacent, off- preserve building locations were no longer available. Therefore, the purpose of this GMP revision is to integrate the mission and objectives of the preserve's new primary landowner/partner, The Nature Conservancy, into long- term management and decision making for the protection of preserve resources and visitor experiences and uses. The kinds of facilities and possible areas of development in the preserve are also addressed.

Certain aspects of the 2000 GMP will need to be revised because of changing circumstances (the addition of The Nature Conservancy as a management partner) and new information (changes in the status of potential off- preserve development sites for visitor and preserve operation facilities). This GMP revision would amend and supplement the 2000 GMP. The GMP revision is intended to:

- Reexamine management areas for visitor information/orientation and the Flint Hills ranching legacy area, as they relate to the location of the visitor, administrative, and maintenance facilities.
- Modify these two management areas that implement the desired conditions of the National Park Service, The Nature Conservancy, the Kansas Park Trust, and the public with regard to location of the proposed facilities, natural and cultural resources management and protection, and visitor experience and appreciation.
- Determine whether actions proposed by the National Park Service or others are consistent with goals embodied in the approved 2000 GMP.
- Correct mapping errors that misidentified the school house and ranch headquarters within the visitor information / orientation area.

The GMP revision is needed to ensure that the foundation for decision making has been developed in consultation with preserve partners, interested stakeholders, and preserve and NPS leadership after an adequate analysis of the benefits, impacts, and economic costs of alternative courses of action.

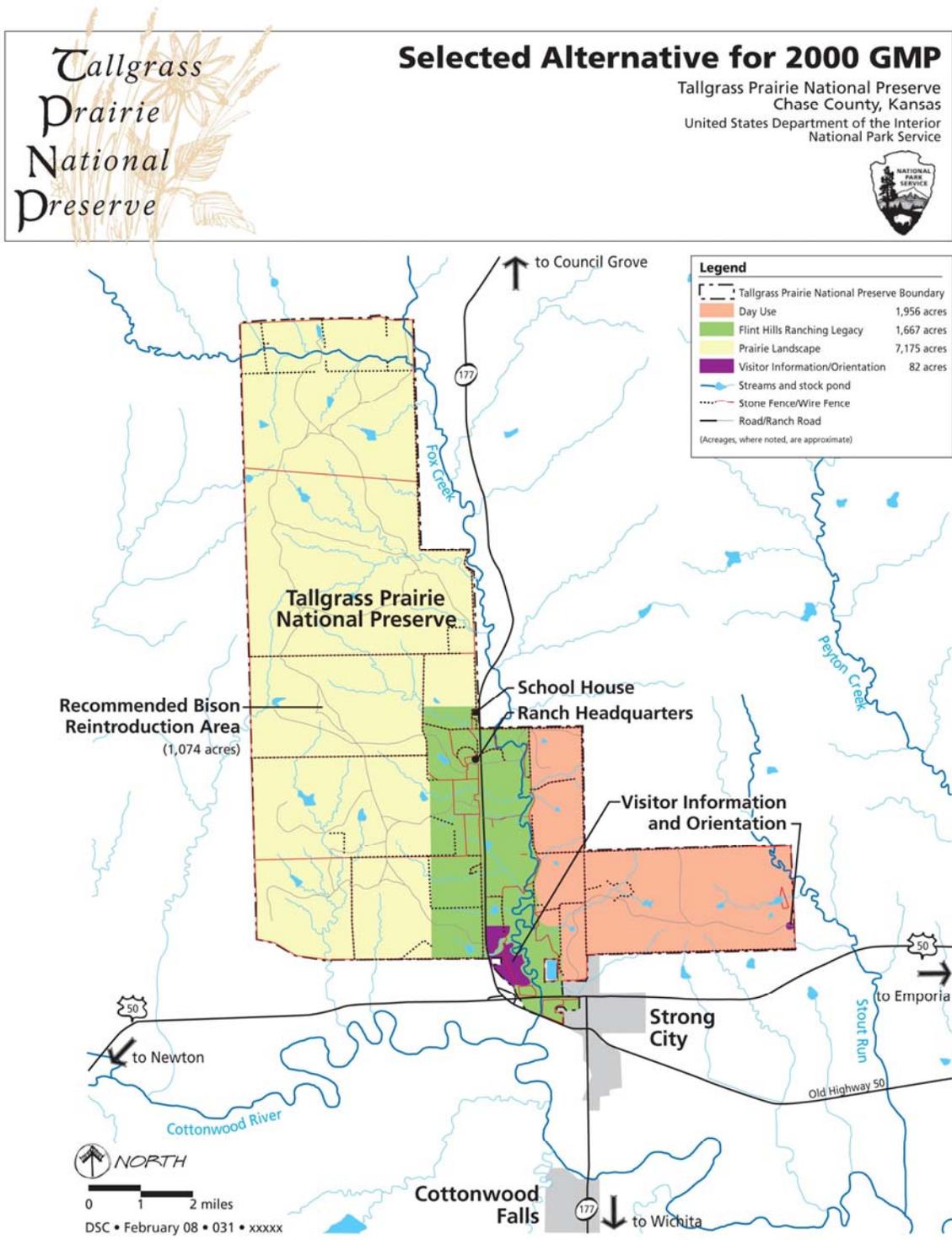


FIGURE 2. SELECTED ALTERNATIVE FOR 2000 GMP

All other decisions and management direction presented in the 2000 GMP would remain valid.

PURPOSE OF AND NEED FOR SITE DEVELOPMENT STUDY— NEW VISITOR, ADMINISTRATIVE, AND MAINTENANCE FACILITIES

The National Park Service proposes to construct a visitor information and administrative center, and a maintenance facility. The general scope and need for these facilities is identified in the 2000 GMP (NPS 2000a). A visitor information center would initiate the first stop for visitors and provide the opportunity to plan their visit. It would also provide parking and serve as a staging area for a public shuttle system and for education and interpretation efforts (NPS 2000a).

The historic Spring Hill / Z Bar Ranch Headquarters, constructed in 1881, consists of a ranch house, three- story barn, springhouse/curing room, privy, icehouse, and poultry house / scratch house. The entirety of the Spring Hill / Z Bar Ranch property is a national historic landmark. Currently, the historic Spring Hill / Z Bar Ranch house and barn are serving as a visitor information station and for certain other public and administrative services. The barn is used for visitor services during the warm months; the ranch house is used during the cold months. The second floor of the ranch house is wheelchair accessible via removable ramps. The mix of uses in the ranch house (visitor information, bookstore, video presentation, offices, etc.) is not compatible with interpretation of the facility. (Interpretation is the communication of ideas, feelings, and stories that enrich understanding and appreciation of preserve resources.) During busy periods, the ranch house becomes crowded and noisy, affecting the information and interpretive services that staff are able to provide. The barn (unheated in winter) is used for orienting and interacting with visitors from approximately May through October.

The proposed administrative facilities would include offices and parking. Currently, the preserve's administrative offices are located in leased space on Broadway Street in Cottonwood Falls, which is located about 2.0 miles south of Strong City (see figure 1).

The proposed maintenance facility would include offices and workspaces for most maintenance and natural resource employees. It would also include inside and outside spaces for storage of equipment, materials, and vehicles, including buses. Employee and vehicle motorpool parking would be provided at the site. The preserve currently has no maintenance facility. Vehicles and equipment are stored in outbuildings at the historic Spring Hill / Z Bar Ranch Headquarters and the small one- room historic icehouse is used as a shop.

Tallgrass Prairie National Preserve averages between 18,000 and 19,000 visitors per year. The 2000 GMP (NPS 2000) identified a need for visitor, administrative, and maintenance facilities to support visitor information and orientation and operations of the preserve. The purpose of the proposed action is to provide new visitor, administrative, and maintenance facilities. The proposed action is needed to achieve desired future conditions and management objectives for the preserve, and to interpret the tallgrass prairie and historic and cultural values for visitors to the preserve.

RELATIONSHIP OF THE PROPOSED ACTION TO PREVIOUS PLANNING EFFORTS

2000 General Management Plan

A general management plan focuses on why the preserve was established (purpose and mission), why it is special (significance), and what resource conditions and visitor experiences should be achieved and maintained (desired conditions).

As stated in the 2000 GMP, the preserve's purpose is

- to preserve, protect, and interpret for the public an example of a tallgrass prairie ecosystem
- to preserve and protect the cultural resources found within the preserve
- to interpret for the public, the cultural resources and the social and cultural values represented within the preserve

The significance of Tallgrass Prairie National Preserve is as follows:

- Of the 400,000- square miles (1,036,279- square kilometers) of tallgrass prairie ecosystem that once covered North America, less than 4% remains; Tallgrass Prairie National Preserve represents a portion of this remnant.
- The landscape of Tallgrass Prairie National Preserve contains a unique collection of natural and cultural features that tells the story of human interaction with the prairie environment, from precontact times to the present.
- The Spring Hill Ranch is an outstanding representation of the transition from the open range to the enclosed holdings of the large cattle companies of the 1880s.
- The Spring Hill Ranch area contains outstanding examples of second empire and other 19th century architectural styles.
- Tallgrass Prairie National Preserve offers opportunities for extraordinary and inspirational scenic views of the Flint Hills prairie landscape.

The 2000 GMP also presents a set of “desired futures” for the preserve that represent desirable conditions that would achieve the purpose of the preserve:

- The preserve's private landowner and the National Park Service maintain a strong partnership to accomplish the mission of the preserve.

- The preserve's management team maintains effective working relationships with preserve neighbors, adjacent communities, and other partners in order to identify and cooperate on issues of mutual interest.
- The preserve has adequate information available for making management decisions.
- Management activities and policies at the preserve lead to the enhancement of the tallgrass prairie ecosystem and a greater understanding of its associated processes.
- Diverse disturbance regimes are an integral part of management activities at the preserve.
- The preserve's seeps, springs, and streams are in a healthy ecological condition and support a diverse aquatic community.
- Open and unobstructed views are maintained as an integral part of the prairie experience.
- Resources are managed to interpret the legacy of human interaction in the Flint Hills.
- Natural and cultural resources are managed to preserve the character- defining features of the Flint Hills cultural landscape.
- The preserve's historic records and objects are properly managed and preserved.
- Education and interpretation efforts extend beyond the boundary of the preserve in order to reach a wide audience.
- Visitors are transported to and through the preserve using a variety of transportation modes, in order to protect the landscape and provide high- quality visitor experiences.

In developing the 2000 GMP, the National Park Service developed five action alternatives that placed visitor services in different areas of the preserve. A sustainable management panel convened and stated that visitor services should be located at the preserve's southern extremity—not at the historic Spring Hill / Z Bar Ranch Headquarters. Additionally, the environmental impact statement accompanying the GMP found that vegetation impacts from development in the southern portion of the preserve would be minimal. These statements were based in part on the fact that there was previously disturbed land inside and outside the preserve near the southern portion on which the visitor center could be built, and that the native prairie in the southern extremity was an isolated fragment of the much larger parcel of prairie preserved in the rest of the park.

The preferred and selected alternative in the 2000 GMP proposed to develop the primary visitor information and orientation area close to the junction of U.S. 50 and State Highway (SH) 177, near Strong City (see figure 2). This would have provided the initial first stop for visitors, allowing them easy access to basic information about the preserve and nearby community resources and services, and enabling them to orient themselves and plan their visit. The location of the visitor center and the services provided would have complemented visitor services in and near the communities of Strong City and Cottonwood Falls. The 2000 GMP stated the exact location would be selected to minimize impact on the prairie, retain aesthetic views and preserve natural and cultural resources, and take advantage of existing or proposed utilities. The exact location could be inside the preserve (as long as it was placed within the visitor information and orientation area) or outside the preserve boundaries.

In addition to location, the 2000 GMP stated that the facility would serve as the primary staging area for a public transportation system and for basic education and interpretation efforts, and include administrative offices, museum collections and archives storage, a maintenance area, and parking areas.

Since the completion of the 2000 GMP, ownership of the preserve has transferred to The Nature Conservancy. The Nature Conservancy has a strict policy regarding acceptable impacts to pristine prairie. As evidenced by their mission (“...to preserve the plants, animals and natural communities that represent the diversity of life on Earth...”), The Nature Conservancy would not support development of a visitor center / administration facility on pristine prairie, no matter the size or location of the parcel. The Nature Conservancy has emphasized that the new management areas (for visitor information and maintenance) be sited so that only minimal deconstruction of native prairie occurs. The guidelines for siting the visitor information and orientation area over a portion of the preserve include placing it near the boundary, out of the floodplain, and in a way that minimizes impacts on prairie resources. The visitor information and orientation management area must harmonize with the special visual qualities of the landscape and the cultural features that create a sense of time and place unique to the preserve. In addition to these desired resource conditions, The Nature Conservancy proposes that the visitor information and orientation management area be constructed on reclaimed or “go back” prairie (previously tilled prairie that consists of native and nonnative grassland vegetation) or previously disturbed ground.

Additionally, over the past six years, areas outside the preserve that could be used for development became unavailable, and the National Park Service’s other primary partner, Kansas Park Trust, felt strongly that visitor services development be located in an area that facilitated visitor movement.

With these conditions in mind, the GMP revision proposes to specifically amend the 2000 GMP in the matter of the visitor information and orientation area location, while remaining consistent with the goals of the 2000 GMP.

Table 1 provides an overview of the management area acreage changes that would result from the GMP revision, and a comparison with the management area acreage under the 2000 GMP.

TABLE 1. COMPARISON OF MANAGEMENT AREA ACREAGE*

Management Areas	2000 GMP	GMP Revision
Visitor Information and Orientation	82	14
Flint Hills Ranching Legacy	1,667	1,735
Day Use	1,956	1,956 (no change)
Prairie Landscape	7,175	7,175 (no change)

*Acreages, where noted, are approximate.

National Park Service Midwest Region Regional Museum Curation and Collection Management Planning

The NPS Midwest Regional Office has developed a regional museum curation and collection management plan. Certain park units within the midwest region will serve as collection points. The preserve will not be one of these, so minimal space in the visitor center would be required for the preserve's museum collections.

DEVELOPMENT PROGRAM FOR PRESERVE FACILITIES

The National Park Service requires the use of servicewide space models (*NPS Facility Planning Model Report*) to determine building space needs and sizes. The models are based on servicewide parameters (e.g., visitation trends) and preserve-specific parameters (current and projected visitation, staff size, special circumstances, etc.).

The space model includes parking, exhibit kiosks, interpretative trail, wayside exhibits, amphitheater, bus and vehicle parking, bus platform, plaza, and patio for outdoor spaces associated with the visitor center. The following indoor functions are included in the visitor center space allocation:

- lobby with orientation desk, information desk, and storage
- exhibit space
- theater
- interpretive sales and storage
- staff restrooms
- offices
- general storage
- recycle bins
- staff lockers
- interpretive and education work area
- library
- break room
- visitor restrooms
- museum collection storage and workspace
- first-aid station

The space model includes parking and a patio for outdoor functions and the following indoor functions for the administration facility:

- administrative staff and superintendent's offices
- conference room
- restrooms
- library space
- mail and copy room
- lobby
- storage areas

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- break room
- showers and lockers
- evidence room
- weapons storage
- researcher workspaces

The maintenance facility includes parking for staff cars, covered parking for preserve equipment (vehicles, mowers, etc.), excess property storage, vehicle fueling, road material storage, vehicle wash, recycle bins, and covered storage for outdoor supplies. The indoor functions include the following:

- lobby
- workroom and storage
- employee support (break room, lockers, and showers)
- carpentry shops and lumber and tool storage
- mechanical, plumbing, and electrical shop and storage
- hazardous materials storage
- grounds maintenance workroom and storage, including a greenhouse
- large vehicle maintenance (bay large enough for tour bus)
- small engine, equipment storage
- indoor parking vehicle storage
- maintenance shops and storage for roads, bridges, and trail equipment
- general storage for custodial, resource management, and maintenance projects
- warehouse

Table 2 provides a summary of the space estimates generated by the model. See appendix B for additional space model details.

TABLE 2. SPACE ESTIMATES FOR PRESERVE FACILITIES

Space Estimates		
	<i>Building (+/- 10%)</i>	<i>Site</i>
Visitor Center	7,400 square feet	0.80 acres
Administration Facility	5,400 square feet	0.90 acres
Maintenance Facility	9,400 square feet	2.3 acres

The visitor center and administration facility estimates include space for processing preserve collections and some curation storage for items transitioning to/from exhibits and long term storage. The remainder of the museum collection would be kept at a centralized regional facility. The site figures for the facilities include necessary associated parking. The space estimates on the maintenance facility include outdoor or uncovered storage.

Class C Cost Estimates

The Class C cost estimates will be calculated at the earliest design phase.

SCOPING

Scoping is an effort to involve agencies and the general public in determining issues to be addressed in the GMP revision. Scoping for the project began in October 2003. A press release describing the proposed action was issued on October 27, 2003 (appendix C). A scoping letter was sent to concerned individuals, agencies, and affiliated tribes on October 28, 2003 (appendix C). Response letters were received from the U.S. Fish and Wildlife Service (USFWS), Kansas Department of Health and Environment, Kansas State Historical Society, Kansas Division of Water Resources, and the Osage Tribal Council (appendix C). In general, these letters identified issues of concern to the agencies or tribe. Three letters were also received from concerned citizens, who suggested possible sites for the facilities—see the discussion in appendix C for details.

In August 2005, the National Park Service, The Nature Conservancy, and the Kansas Park Trust agreed to revisit prior decisions and look at new alternatives because of The Nature Conservancy's desire to avoid impacts to pristine native prairie and the lack of other viable options in and near the preserve. Two new sites were proposed (one for the visitor center and administrative facilities, and a second location for the maintenance facility). Based on this decision, notification letters about the change of the project scope were sent to agencies in March, July, and August 2006.

IMPACT TOPICS

Issues and concerns related to the proposed action were identified throughout the preliminary planning process by specialists from the National Park Service, The Nature Conservancy, Kansas Park Trust, as well as federal and state agencies, American Indian tribes, and the public. Impact topics are the resources of concern that could be affected by the alternatives. Specific impact topics were identified to ensure that the alternatives were compared on the basis of the most relevant topics. Impact topics were identified based on federal laws, regulations, orders, NPS *Management Policies* 2006, and NPS knowledge of special or vulnerable resources.

The National Environmental Policy Act of 1969 (NEPA) and the Council on Environmental Quality's implementing regulations (40 *Code of Federal Regulations* [CFR] 1500–1508) requires the consideration of impacts on affected ecosystems and is the basic national charter for the protection of the environment. NEPA requires federal agencies to use all practicable means to restore and enhance the quality of the human environment and to avoid and minimize any possible adverse effects of their actions on the environment. Specific impact topics were identified to focus discussion and comparison of the environmental consequences of each alternative.

Impact Topics Included in this Document

Historic Structures

The National Historic Preservation Act of 1966, as amended in 1992 (16 *United States Code* [USC] 470 *et seq.*), NEPA, NPS Organic Act, NPS *Management Policies* 2006, Director's Order – 12: *Conservation Planning, Environmental Impact Analysis, and Decision-making* (2001), and Director's Order – 28: *Cultural Resources Management Guideline* require the consideration of impacts on cultural resources, including historic structures, either listed in or eligible to be listed in the National Register of Historic Places (NRHP). Historic structures currently house park operations and visitor services, and are adjacent to the proposed alternative sites; therefore, the impact topic of historic structures is included for further analysis.

Archeology

Archeological resources are known to be present within the preserve; however, their extent and exact locations are unknown. The proposed sites may contain archeological materials, both prehistoric and historic, and these materials could be affected by the alternatives. Therefore, the impact topic of archeology is included for further analysis.

Cultural Landscapes

As described by the NPS *Cultural Resource Management Guideline* (Director's Order – 28), a cultural landscape is,

... a reflection of human adaptation and use of natural resources and is often expressed in the way land is organized and divided, patterns of settlement, land use, systems of circulation, and the types of structures that are built. The character of a cultural landscape is defined both by physical materials, such as roads, buildings, walls, and vegetation, and by use reflecting cultural values and traditions.

The preserve is listed as a national historic landmark and represents the ranching history of the area. Proposed construction of new facilities would result in new features on the landscape and may impact the theme for which the preserve lands were nominated. Therefore, the impact topic of cultural landscapes is included for further analysis.

Soils

Both the no- action and proposed action alternatives would involve construction of facilities within the preserve that would impact soils and their productivity. Therefore, the impact topic of soils is included for further analysis.

Prime and Unique Farmlands

In 1980, the Council on Environmental Quality directed federal agencies to assess the effects of their actions on farmland soils classified as prime or unique by the U.S. Department of Agriculture, Natural Resources Conservation Service. Prime or unique farmland is defined as soil, which particularly produces general crops such as common foods, forage, fiber, and oil seed; unique farmland produces specialty crops such as fruits, vegetables, and nuts. Two soil units within the preserve, Martin and Reading (Gay Spencer, NRCS, pers. comm.), are considered “prime farmland” soil, which are present in the areas proposed for construction of the visitor, administrative, and maintenance facilities, and may be affected by the proposed action; therefore, the impact topic of prime and unique farmlands is included for further analysis.

Vegetation

Tallgrass prairie that once covered much of the eastern Plains has been reduced to a fraction of its original extent; only about 4% of the original total remains. The preserve also contains various other types of vegetation. Both the no- action and proposed action alternatives would involve construction of facilities within the preserve, which would impact vegetation. Therefore, the impact topic of vegetation is included for further analysis.

Threatened and Endangered Species

The Endangered Species Act (1973), as amended, requires an examination of impacts on all federally listed threatened or endangered species. NPS policy also requires examination of the impacts on federal candidate species, as well as state- listed threatened, endangered, candidate, rare, declining, and sensitive species. The stream that lies to the south of the proposed visitor center / administrative parcel lies within the range of the endangered Topeka shiner (*Notropis topeka*). Therefore, the impact topic of threatened and endangered species is included for further analysis.

Wildlife

Policies of the National Park Service seek to protect the systems and processes of naturally occurring biotic communities, including the natural abundance, diversity, and ecological integrity of plants and animals (NPS *Management Policies* 2006). Both the no- action and proposed action alternatives would involve construction of facilities within the preserve, which would impact the various species of wildlife temporarily and to some degree permanently. Therefore, the impact topic of wildlife is included for further analysis.

Visitor Experience/Appreciation

Both alternatives propose construction of new visitor facilities, which will change visitor experience and appreciation of the preserve. Therefore, the impact topic of visitor experience/ appreciation is included for further analysis.

Scenic Quality

Both alternatives propose construction of new visitor facilities, which would result in new features on the landscape. The proposed construction sites are visible from numerous locations within and outside the preserve boundary. Therefore, the impact topic of scenic quality is included for further analysis.

Water Quality

The 1972 Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977, is a national policy to restore and maintain the chemical, physical, and biological integrity of the nation's waters; to enhance the quality of water resources; and to prevent, control, and abate water pollution. NPS *Management Policies 2006* provide direction for the preservation, use, and quality of water in national park units. The proposed construction sites are within the Fox Creek watershed and may contain surface- and groundwater resources. Therefore, the impact topic of water quality is included for further analysis.

Floodplains

Executive Order 11988 (*Floodplain Management*) requires federal agencies to avoid construction within the 100- year floodplain unless no other practicable alternative exists. A small portion of the maintenance facility parcel proposed to be redesignated as visitor information and orientation area is located within the 100- year floodplain of Fox Creek; therefore, the impact topic of floodplains is included for further analysis.

Preserve Operations

Both alternatives propose construction of new facilities that would change current preserve operations; however, the location of those facilities varies by alternative. Therefore, the impact topic of preserve operations is included for further analysis.

Impact Topics Dismissed from Further Analysis

Some impact topics have been dismissed from further analysis because the proposed action would have no impact or a negligible impact on them.

Wetlands

Executive Order 11990 (*Protection of Wetlands*) requires federal agencies to avoid, where possible, adversely impacting wetlands. NPS Director's Order – 77- 1: *Wetland Protection* (NPS 2002), also directs the National Park Service to avoid or minimize adverse impacts to wetlands from new development of facilities, or to compensate for unavoidable impacts via restoration of degraded wetlands. Actions proposed by the National Park Service that have the potential to have adverse wetlands impacts must be addressed in environmental documents. If the

preferred alternative in an environmental assessment would result in adverse impacts on wetlands, a statement of findings for wetlands must be prepared. There are no wetlands on either parcel being considered for the new visitor center, administrative, and maintenance facilities. No wetlands would be disturbed or adversely affected by the proposed action; therefore, wetlands is dismissed as an impact topic in this GMP revision.

Air Quality

Section 118 of the Clean Air Act of 1963, as amended, requires preserve managers to meet federal, state, and local air pollution standards. It also classifies units of federally owned lands into different air quality classes. *NPS Management Policies 2006* address the need to analyze potential impacts to air quality during preserve planning. Tallgrass Prairie National Preserve, if federally owned, would be considered a class II air quality area under the Clean Air Act (NPS 2000).

Earthwork, material hauling, and other construction-related activities could result in temporarily increased vehicle exhaust and emissions. However, hydrocarbons, nitrous oxide, and sulfur dioxide emissions, as well as airborne particulates from fugitive dust plumes, would generally be rapidly dissipated by prevailing winds. Air quality could be degraded locally, but this effect would be negligible and temporary, lasting only until construction was completed. Effects would be controlled and mitigated, and no long-term change in air quality would be expected. Design guidelines include provisions for orienting bus lanes so that exhaust would be emitted away from pedestrian areas. Despite an anticipated increase in bus traffic, impacts to air quality are expected to be negligible over the long term. Thus, air quality is dismissed as an impact topic in this GMP revision.

Ecologically Critical Areas, Wild and Scenic Rivers, Other Unique Natural Areas

Tallgrass Prairie National Preserve was set aside to preserve some of the last remaining tall-grass prairie in North America. Impacts to tallgrass prairie are discussed in the “Vegetation” topic in the “Environmental Consequences” section. Impacts to the Topeka shiner and its habitat are discussed in the threatened and endangered species topic under the “Environmental Consequences” section. There are no other specifically designated unique natural areas within the preserve, or areas that have been designated as ecologically critical, or designations of wild and scenic rivers. Because there would be no impacts to resources in these categories, other than vegetation and endangered species, the topics of ecologically critical areas, wild and scenic rivers, and other unique natural areas are dismissed as impact topics in this GMP revision.

Soundscapes

In accordance with *NPS Management Policies 2006* and Director’s Order – 47: *Sound Preservation and Noise Management* (NPS 2000b), an important part of the NPS mission is preservation of natural soundscapes associated with national park units. Natural soundscapes exist in the absence of human-caused sound. The natural ambient soundscape is the aggregate

of all natural sounds that occur in park units, together with the physical capacity for transmitting natural sounds. Natural sounds occur within and beyond the range of sounds that humans can perceive and can be transmitted through air, water, or solid materials. The frequency, magnitude, and duration of human- caused sound considered acceptable varies among NPS units, as well as throughout each park unit, being generally greater in developed areas and less in undeveloped areas.

Hauling material, operating construction equipment, and other construction- related activities would result in human- caused sound. However, construction activity for new facilities would occur in an area where human- caused sound (e.g., highway traffic) is part of the background sound environment. Sounds from construction activities would be temporary, lasting only until facility development is completed. Sounds would occasionally be expected from activities (e.g., carpentry and plumbing work) at the new maintenance facility. Maintenance facilities are located close to Strong City, where human- caused sounds (e.g., highway traffic, trains, and other human activities) are part of the background sound environment. Sounds from construction activities or associated with the proposed facilities and transportation shuttle would not interfere with the ability of wildlife to define territories, attract mates, locate prey, navigate, or detect predators (and other dangers). Because the new NPS facilities would be located in an area where human- caused sound is part of the existing background sound environment, and because any construction- related or maintenance- related sounds would be negligible (and in the case of construction noise, short term), soundscapes is dismissed as an impact topic in this GMP revision.

Night Skies

In accordance with NPS *Management Policies* 2006, the National Park Service strives to preserve natural ambient lightscares, which are natural resources and values that exist in the absence of human- caused light. Commercial, residential, and agricultural development could introduce light into otherwise naturally dark areas.

Within the preserve and surrounding area, night skies contain little human- caused light. Human- caused light is greatest near Strong City and U.S. 50. Some light sources originate from headlights along SH 177, residences and ranches along preserve boundaries, and Spring Hill / Z Bar Ranch Headquarters (additional security lighting was installed in the late 1990s). These areas are directly visible from vantage and viewing points within the preserve.

The proposed action would bring new light sources into the preserve south of the Spring Hill / Z Bar Ranch Headquarters along SH 177, and near the sewage lagoons. Currently, both of these areas contain human- caused light sources. The National Park Service minimizes extraneous light sources and protects the dark night sky by using shielded lighting, downward- directed lighting, and strategically located light sources. Because of such efforts and the largely rural and undeveloped landscape surrounding the preserve, there are outstanding opportunities to see the stars, moon, and planets on clear nights. Impacts to night skies would be negligible, long- term, and adverse. The expanse of sky that can be experienced at night within the preserve will continue to offer a unique experience. Based on this analysis, night skies is dismissed as an impact topic in this GMP revision.

Ethnographic Resources

Ethnographic resources are defined as any “site, structure, object, landscape, or natural resource feature assigned traditional legendary, religious, subsistence, or other significance in the cultural system of a group traditionally associated with it.” The National Historic Preservation Act, as amended, and Director’s Order – 28: *Cultural Resource Management Guideline* (NPS 1997) require consideration of impacts on ethnographic resources.

American Indian tribes culturally affiliated with the lands of Tallgrass Prairie National Preserve include the Kaws, Wichitas, Pawnees, and Osages. These tribes were notified of the proposed action in a letter dated October 28, 2003, and again in 2006. One tribe, the Osage, responded to the scoping letter, indicating that the southern area of the preserve could have religious or cultural significance since it is within the former Osage Reservation and homeland. The tribe requested that if bone, pottery, chipped stone, etc., are exposed during construction, that activities cease and the tribe be contacted. These measures are included in the mitigation section of this document.

In general, traditionally affiliated tribes are concerned that construction activities could uncover human remains, funerary objects, sacred objects, or objects of cultural patrimony. Construction activities associated with the proposed action could uncover such items, although the probability of this occurring is considered very low (Jones 2004). However, in the event that any human remains or other objects are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act of 1990 would be followed.

The 2000 GMP states that “minor impacts on previously unidentified ethnographic resources could be caused by construction”; however, an ethnographic study has not been conducted at the preserve. Copies of this GMP revision will be sent to each affiliated tribe for review and comment. If additional issues or concerns are identified, appropriate consultations would be undertaken. Because it is unlikely that ethnographic resources would be affected and because steps would be taken to protect any human remains or other objects, the impact to ethnographic resources would be negligible; thus, ethnographic resources is dismissed as an impact topic in this GMP revision.

Museum Collections

NPS *Management Policies* 2006 and NPS Director’s Order – 28: *Cultural Resource Guideline* (NPS 1997) require that impacts on museum collections (historic artifacts, natural specimens, and archival and manuscript material) be considered in environmental documents.

Both the National Park Service and the National Park Trust acquired cultural resource collections. The National Park Service and The Nature Conservancy are now the joint stewards of the former National Park Trust collection. Most items (numbering in the hundreds) formerly owned by the National Park Trust are stored and/or exhibited at the Spring Hill / Z Bar Ranch Headquarters in the ranch house, barn, curing room, and school house (e.g., farm equipment, machinery, dishes, furniture, and books). Some of the NPS and Nature Conservancy artifacts on loan to the National Park Service are stored at the NPS Midwest Archeological Center in

Lincoln, Nebraska. Two additional items (a historic map and ledger) are also on loan and are stored at Fort Scott National Historic Site in southeast Kansas.

Museum collections will not be curated at the preserve because the NPS Midwest Regional Office has developed a regional museum curation and collection management plan for the preserve. Therefore, there is no impact to museum collections and museum collections are dismissed as an impact topic in this GMP revision.

Environmental Justice

Executive Order 12898 (*Federal Action to Address Environmental Justice in Minority Populations and Low- Income Populations*) requires federal agencies to identify and address disproportionately high and adverse human health or environmental effects of federal programs and policies on minority and low- income populations and communities. The proposed action would not have disproportionate or adverse impacts on minorities or economically disadvantaged populations.

Executive Order 13045 (*Protection of Children from Environmental Health Risks and Safety Risks*) requires federal agencies to identify and address disproportionately high and adverse human health or environmental effects of federal programs and policies on children. The proposed action would not have disproportionate or adverse impacts on children; thus, environmental justice is dismissed as an impact topic in this GMP revision.

Indian Trust Resources

Secretarial Order 3175 (*Indian Trust Assets*) requires that any anticipated impacts to Indian trust resources from a proposed project or action by Department of the Interior agencies be explicitly addressed in environmental documents. The federal Indian trust responsibility is a legally enforceable fiduciary obligation on the part of the United States to protect tribal lands, assets, resources, and treaty rights, and it represents a duty to carry out the mandates of federal law with respect to American Indian tribes.

There are no Indian trust resources on Tallgrass Prairie National Preserve. The lands comprising the preserve are not held in trust by the secretary of the interior for the benefit of Indians due to their status as Indians. Therefore, there would be no impact to Indian trust resources under any of the alternatives, and Indian trust resources are dismissed as an impact topic in this GMP revision.

Socioeconomic Environment

Implementation of the 2000 GMP, which includes construction of the new visitor center and administrative facilities, would have little or no impact on the region's socioeconomic environment (NPS 2000). Construction of new facilities may create some opportunities for employment regionally, but impacts would be negligible and temporary (lasting only until construction is completed).

If the alternative B sites were selected as the site for new facilities and if the National Park Service acquired this site from The Nature Conservancy (owner), rather than leasing it over the long term, this land (approximately 11.5 acres) would be removed from county tax roles. The annual county tax revenue generated by this land is estimated at \$30 per year (NPS 2004a). To compensate local governments for loss of tax revenue, 31 USC 6904 provides that the federal government shall make a payment in lieu of taxes to the local government that is equal to 1% of the fair market value of the land (not to exceed the amount of real property taxes levied on the property during the last fiscal year in which the land was acquired). The law provides that the payment in lieu of taxes shall be made for the five fiscal years after that in which the land is acquired.

Between 1998 and 2006, the preserve has averaged 18,662 visitors per year (Steve Miller, National Park Service, pers. comm. 2007). In 2006, preserve visitation was at its highest level. Visitation is anticipated to increase with the opening of the visitor center. Long-term visitation levels are also anticipated to increase as the preserve further develops and activities expand and increase. Local communities would benefit from other visitor services including a grocery store, fuel service, specialty shops, auto repair, etc. These impacts are addressed in the 2000 GMP and are not expected to differ from this analysis; and because any impacts would be negligible, the socioeconomic environment is dismissed as an impact topic in this GMP revision.

Hazardous Materials

Initial ground observations in the study area conducted by preserve staff have not found any evidence of hazardous waste or materials. Hazardous wastes that are sometimes associated with ranches include herbicides, pesticides, paints, solvents, and fuels. These parcels are not expected to have waste dumps containing hazardous materials.

However, the National Park Service would conduct a phase 1 (and if necessary, phase 2) environmental baseline survey of the parcels prior to acquiring any new property. Because of the low potential for the presence of hazardous wastes and materials, hazardous materials are dismissed as an impact topic in this GMP revision.

Health and Safety

The potential for grassland wildfires is an increasing concern as the preserve develops and visitation increases. The 2000 GMP recommended that in the future, access to all areas could be restricted during periods of high or extreme fire danger. The emergency response from the Chase County Volunteer Fire Department is considered good and has been estimated to be within 12–15 minutes. Local authorities provide emergency medical services, law enforcement support, and initial response for containing prairie fires. The alternatives would not change the potential for wildland fires. Under the preferred alternative, the preserve staff would be more readily available to respond to accidents and incidents. This would result in a negligible beneficial effect; therefore, health and safety is dismissed as an impact topic in this GMP revision.

